

1. Solve the equation below. Then, choose the interval that contains the solution.

$$-17(-12x + 3) = -18(7x - 14)$$

- A.  $x \in [-1.29, -0.35]$
  - B.  $x \in [0.2, 0.65]$
  - C.  $x \in [-3.56, -1.75]$
  - D.  $x \in [0.83, 1.17]$
  - E. There are no real solutions.
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2. Find the equation of the line described below. Write the linear equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Parallel to  $3x - 4y = 12$  and passing through the point  $(6, 9)$ .

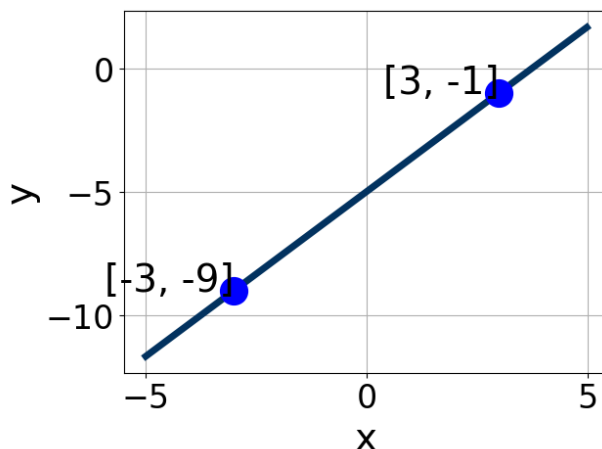
- A.  $m \in [0.67, 1.16]$   $b \in [4.47, 5.43]$
  - B.  $m \in [1.31, 1.56]$   $b \in [4.47, 5.43]$
  - C.  $m \in [-0.91, -0.16]$   $b \in [12.68, 13.77]$
  - D.  $m \in [0.67, 1.16]$   $b \in [-5.48, -3.1]$
  - E.  $m \in [0.67, 1.16]$   $b \in [2.96, 3.8]$
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3. Find the equation of the line described below. Write the linear equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Perpendicular to  $6x - 7y = 7$  and passing through the point  $(-6, -8)$ .

- A.  $m \in [-0.99, -0.1]$   $b \in [-15.17, -14.25]$
- B.  $m \in [-1.91, -1.14]$   $b \in [-15.17, -14.25]$
- C.  $m \in [-1.91, -1.14]$   $b \in [-4.17, -1.8]$
- D.  $m \in [0.93, 1.7]$   $b \in [-1.39, -0.24]$
- E.  $m \in [-1.91, -1.14]$   $b \in [14.93, 15.47]$

4. Write the equation of the line in the graph below in Standard Form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [-2.9, -0.3]$ ,  $B \in [0.01, 1.56]$ , and  $C \in [-6, -2]$
- B.  $A \in [-7, -1.8]$ ,  $B \in [2.87, 3.77]$ , and  $C \in [-16, -6]$
- C.  $A \in [0, 4.8]$ ,  $B \in [2.87, 3.77]$ , and  $C \in [-16, -6]$
- D.  $A \in [0, 4.8]$ ,  $B \in [-3.02, -2.9]$ , and  $C \in [10, 20]$
- E.  $A \in [-2.9, -0.3]$ ,  $B \in [-1.54, -0.99]$ , and  $C \in [4, 11]$

5. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{-8x + 7}{4} - \frac{-5x + 3}{7} = \frac{-6x - 5}{8}$$

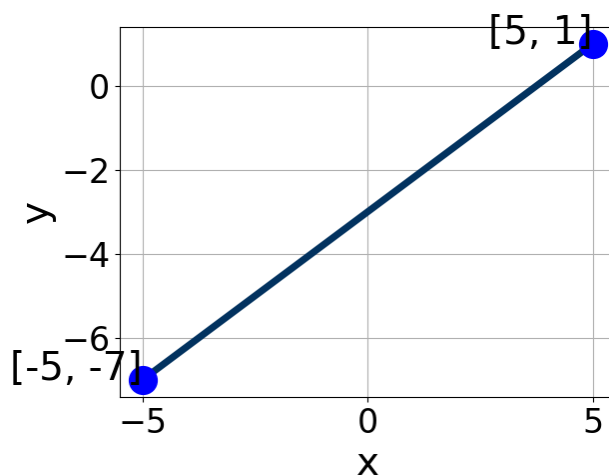
- A.  $x \in [-0.65, 0.35]$
- B.  $x \in [14.8, 21.8]$
- C.  $x \in [3.63, 4.63]$
- D.  $x \in [4.23, 6.23]$
- E. There are no real solutions.

6. First, find the equation of the line containing the two points below. Then, write the equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$(9, 5)$  and  $(-11, -8)$

- A.  $m \in [-0.1, 2.1]$   $b \in [0.2, 0.9]$
- B.  $m \in [-0.1, 2.1]$   $b \in [1, 5.7]$
- C.  $m \in [-1.4, 0.2]$   $b \in [-17.6, -13.7]$
- D.  $m \in [-0.1, 2.1]$   $b \in [-1.3, 0.7]$
- E.  $m \in [-0.1, 2.1]$   $b \in [-4.3, -2.4]$

7. Write the equation of the line in the graph below in Standard Form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [3.8, 4.4]$ ,  $B \in [2.3, 8.6]$ , and  $C \in [-16, -8]$
- B.  $A \in [-3, 0.6]$ ,  $B \in [-1.8, -0.4]$ , and  $C \in [1, 4]$
- C.  $A \in [-3, 0.6]$ ,  $B \in [-0.4, 2.2]$ , and  $C \in [-6, -1]$
- D.  $A \in [-5.7, -3.3]$ ,  $B \in [2.3, 8.6]$ , and  $C \in [-16, -8]$
- E.  $A \in [3.8, 4.4]$ ,  $B \in [-5.3, -3.5]$ , and  $C \in [13, 20]$

8. Solve the equation below. Then, choose the interval that contains the solution.

$$-10(8x + 5) = -14(7x + 9)$$

- A.  $x \in [-5.22, -2.22]$
- B.  $x \in [5.78, 10.78]$
- C.  $x \in [-0.99, 3.01]$
- D.  $x \in [-9.78, -6.78]$
- E. There are no real solutions.

9. First, find the equation of the line containing the two points below. Then, write the equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$$(11, 4) \text{ and } (7, -11)$$

- A.  $m \in [3.75, 8.75]$   $b \in [-42.25, -33.25]$
- B.  $m \in [-8.75, -1.75]$   $b \in [7.25, 21.25]$
- C.  $m \in [3.75, 8.75]$   $b \in [-12, 0]$
- D.  $m \in [3.75, 8.75]$   $b \in [33.25, 42.25]$
- E.  $m \in [3.75, 8.75]$   $b \in [-23, -16]$

10. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x - 9}{7} - \frac{7x - 9}{4} = \frac{-4x - 5}{6}$$

- A.  $x \in [-8.28, -2.28]$
- B.  $x \in [1.51, 5.51]$
- C.  $x \in [-3.8, -0.8]$
- D.  $x \in [8.77, 10.77]$
- E. There are no real solutions.

